



PARK AVENUE RELOCATION

SOCIOECONOMIC, COMMUNITY FACILITIES, AND
LAND USE TECHNICAL REPORT

JUNE 2018

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Socioeconomics, Community Facilities, and Land Use Technical Report

Delaware Department of Transportation (DelDOT)

Town of Georgetown in Sussex County, Delaware

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List of Acronyms

ACS	American Community Survey
CEQ	Council of Environmental Quality
DeIDOL	Delaware Department of Labor
DeIDOT	Delaware Department of Transportation
DPC	Delaware Population Consortium
EA	Environmental Assessment
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FY	Fiscal Year
HHS	Health and Human Services
NEPA	National Environmental Policy Act
ROFA	Runway Object Free Area
RPZ	Runway Protection Zone
USDOT	U.S. Department of Transportation

1.0 Introduction

The Delaware Department of Transportation (DelDOT), in cooperation with the Federal Highway Administration (FHWA), is evaluating the relocation and upgrade of Park Avenue in the southern portion of the Georgetown area in Sussex County, Delaware. Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, and in accordance with FHWA regulations, an Environmental Assessment (EA) has been prepared to analyze and document the potential social, economic, and environmental effects associated with the proposed transportation improvements.

The purpose of this Technical Report is to identify and assess the impact to socioeconomic resources, community facilities, and land use within the socioeconomic resources study area. Information in this report, described below, supports discussions presented in the EA.

- **Section 1** provides an overview of the study area and Purpose and Need of the project;
- **Section 2** describes the demographics and neighborhoods within the study area;
- **Section 3** describes the Environmental Justice populations within the study area and the potential for impacts;
- **Section 4** describes the community facilities within the study area and the potential for impacts;
- **Section 5** describes the existing and future land use within the study area and the potential for impacts.

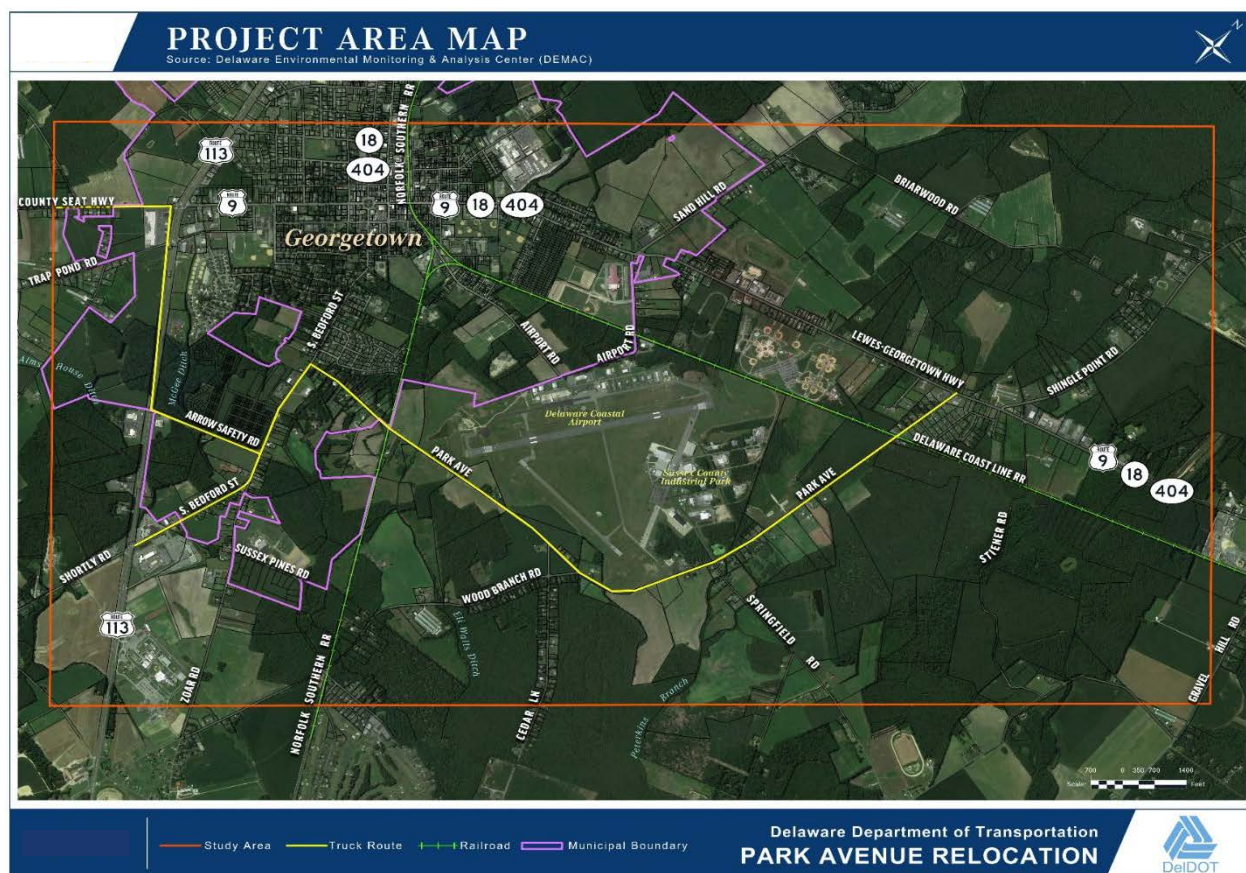
1.1 Description of the Study Area

The project's study area extends from one-half-mile east of Park Avenue to one-quarter-mile west of US 113, and includes the majority of the Town of Georgetown, the Delaware Coastal Airport, and the Sussex County Industrial Park (refer to **Figure 1-1**). The study area was developed based upon review of the land use in the area. The area in the vicinity and to the south of Park Avenue, South Bedford Street, and Arrow Safety Road is predominantly industrial or is planned to be industrial with pockets of residences, farmland, wetlands, and forested areas, as well as a new residential development planned north of Arrow Safety Road. The roadways further south of Park Avenue and South Bedford Street, such as Wood Branch Road, support low density residential development. Residential mixed with commercial uses border US 9 and DuPont Boulevard (US 113); while the majority of the vacant developable land between these roadways is designated for future residential development (Sussex County, 2008).

1.2 Background

Park Avenue, also known as US Route 9 Truck Bypass, is the designated truck route for tractor trailers moving through the area, providing access to the Sussex County Industrial Park, southeast of the Delaware Coastal Airport. Sussex County's 2017-2022 Capital Transportation Program Request has identified Park Avenue as a priority for improvement (Sussex County, 2015). DelDOT's Capital Transportation Plan for fiscal year (FY) 2017-2022, the currently approved plan, authorizes funding for preliminary engineering and right-of-way for the project (DelDOT, 2017). The report and plan note that the roads used for the truck bypass should be upgraded, with appropriate turn lanes and signalized intersections, and that the truck route should be realigned, removing the truck route from the existing residential areas of Park Avenue and South Bedford Street (Sussex County, 2015 and DelDOT, 2017).

Figure 1-1: Project Area Map



1.3 Existing Conditions

US 9 travels through the Town of Georgetown connecting Laurel, Delaware with Lewes, Delaware. West of US 113, US 9 is known as County Seat Highway; east of US 113, US 9 is known as Lewes-Georgetown Highway (refer to **Figure 1-1**). To eliminate truck traffic through the center of Georgetown, DelDOT designated a truck bypass which begins at County Seat Highway (US 9) west of Georgetown, then follows US 113, Road 87 (Arrow Safety Road), Road 431 (South Bedford Street), and Park Avenue, and reconnects with Lewes-Georgetown Highway (US 9) east of Georgetown. The five-mile bypass requires that trucks turn at five intersections and cross two railroads at-grade, the Norfolk Southern Line east of South Bedford Street on Park Avenue and the Delaware Coast Line south of Lewes-Georgetown Highway (US 9) on Park Avenue. The bypass is the only access route to the Sussex County Industrial Park and is a main route to the Delaware Coastal Airport (formerly the Sussex County Airport).

1.4 Purpose and Need

The purpose of the Park Avenue relocation, being undertaken by DelDOT, is to improve the traffic operations and safety of the US 9 truck bypass from east of Georgetown to US 113.

The primary need for the Park Avenue project is to improve traffic operations and safety. The existing truck route between US 9 and US 113 has several turning movements that hinder traffic operations, the roadway width is narrow and does not meet current design for a truck route, and the average number of crashes along the truck route between US 113 and US 9 is higher than the state and Sussex County averages.

Secondary needs are to support economic growth and to support federal, state, and local initiatives by focusing on improving transportation infrastructure to provide safe and convenient road access across the region and to areas zoned for business/industrial use.

1.5 Alternatives Considered for Evaluation

Conceptual alternatives that could potentially address the Purpose and Need for study were developed and then screened and compared by DelDOT during the conceptual design phase based on criteria developed to determine whether or not the identified elements of Purpose and Need would be met. The alternatives evaluated as well as the screening criteria are described in **Chapter 2.0** of the EA. Following is a description of the two alternatives carried forward for evaluation.

1.5.1 No-Build Alternative

Under the No-Build Alternative, no improvements to or relocation of Park Avenue would be undertaken; however, routine maintenance of the US 9 truck route would continue. The No-Build Alternative would not satisfy the identified needs of the project as it would not improve traffic operations and safety along Park Avenue. The No-Build Alternative is also inconsistent with local plans and would not accommodate growth at the Delaware Coastal Airport (Town of Georgetown, 2010; Sussex County, 2008, 2015, and 2016). The No-Build Alternative has been carried forward in this EA as a benchmark for assessing the transportation benefits and environmental impacts of Build Alternative 6, the Preferred Alternative.

1.5.2 Preferred Alternative

The Preferred Alternative would begin at Arrow Safety Road and straighten the alignment of the truck bypass by creating an additional leg at the intersection with South Bedford Street. The alternative would then travel along a new alignment to connect to Park Avenue east of the Norfolk Southern Railroad tracks. This alternative would avoid the runway object free area (ROFA) as well as the central portion of the runway protection zone (RPZ) associated with the proposed growth of the Delaware Coastal Airport, and minimize wetland impacts.

This truck route relocation would improve traffic operations by improving the roadway alignment and typical section, providing a continuous route around Georgetown, connecting US 113 west of Georgetown to US 9 east of Georgetown, and improving the Park Avenue and US 9 intersection and the Park Avenue and South Bedford Street/Arrow Safety Road intersection. The Preferred Alternative is consistent with local plans and allows for the future growth of the Delaware Coastal Airport as proposed by Sussex County, thus potentially encouraging economic development in the region (Town of Georgetown, 2010; Sussex County, 2008, 2015, and 2016).

2.0 Demographics and Neighborhoods

2.1 Methodology

The following demographic profile was created using data obtained from the US Census Bureau's (Census) Decennial Censuses and American Community Surveys (ACS). Census collects and reports data for jurisdictions, as well as for several geographical units that are subsets of the jurisdiction (i.e. Census tract, block group, and block).

Population projection data was obtained from the Delaware Population Consortium (DPC), where yearly population projections are made for the State, Counties, and selected municipalities. Neighborhoods, Delaware Downtown Development Districts, and industrial parks were identified from desktop searches and GIS data provided by the *Delaware FirstMap GIS*. Economic information for Sussex County, Delaware, the Town of Georgetown, and the study area region were obtained from local comprehensive plans, the Sussex County Economic Development Office, and the Delaware Department of Labor data.

2.2 Existing Conditions

2.2.1 Population

For the purposes of this report, study area demographics were calculated using demographic information for each of the nine block groups fully or partially within the study area boundaries, as identified in **Figure 2-1**. **Table 2-1** provides population data for the block groups compared with data for the Town of Georgetown, Sussex County, and the State of Delaware.

Persons under the age of 18 comprise the largest part of the study area population (22 percent) (Census, 2015d). People between the ages 25 to 34 are the second most represented group, at 17 percent, closely followed by 65 and over (15 percent). The distribution of ages for the study area is similar to the overall distribution for the State of Delaware and Sussex County, except for the County's percentage of 65 and over (23 percent). Similarly, for the Town of Georgetown, persons under the age of 18 have the highest percentage (27 percent), followed by 25 to 34 (21 percent) and 65 and over (12 percent).

Sussex County and the State of Delaware have consistently grown since the 1970s, although Sussex County's growth has far exceeded Delaware's growth (158% increase compared with a 69% increase over the 45-year period, respectively) (refer to **Table 2-2**). While population is anticipated to increase over the next 25 years, the future rate of population increase is anticipated to be much slower than historically (25% increase for Sussex County and 15% increase for Delaware) (refer to **Table 2-3**).

Table 2-1: Demographic Profile

Characteristics		Census Tract 505.01		Census Tract 505.03		Census Tract 505.04			Census Tract 508.02		Study Area Total	Town of Georgetown	Sussex County	State of Delaware
		Block Group 1	Block Group 2	Block Group 1	Block Group 2	Block Group 1	Block Group 2	Block Group 3	Block Group 1	Block Group 2				
Total Population		1,217	2,491	4,132	1,623	2,095	2,067	2,029	1,628	3,043	20,325	6,775	207,302	926,454
Gender	Male	485 (39.9%)	1,110 (44.6%)	2,348 (56.8%)	817 (50.3%)	1,674 (79.9%)	1,059 (51.2%)	892 (44.0%)	750 (46.1%)	1,573 (51.7%)	10,708 (52.7%)	3,599 (53.1%)	100,782 (48.6%)	448,413 (48.4%)
	Female	732 (60.1%)	1,381 (55.4%)	1,784 (43.2%)	806 (49.7%)	421 (20.1%)	1,008 (48.8%)	1,137 (56.0%)	878 (53.9%)	1,470 (48.3%)	9,617 (47.3%)	3,176 (46.9%)	106,520 (51.4%)	478,041 (51.6%)
Age	Under 18	216 (17.7%)	433 (17.4%)	1,193 (28.9%)	330 (20.3%)	118 (5.6%)	683 (33.0%)	614 (30.3%)	213 (13.1%)	648 (21.3%)	4,448 (21.9%)	1,827 (27.0%)	40,977 (19.8%)	204,154 (22.0%)
	18-24	93 (7.6%)	372 (14.9%)	484 (11.7%)	128 (7.9%)	280 (13.4%)	105 (5.1%)	74 (3.6%)	39 (2.4%)	188 (6.2%)	1,763 (8.7%)	677 (10.0%)	14,776 (7.1%)	91,182 (9.8%)
	25-34	144 (11.8%)	279 (11.2%)	871 (21.1%)	330 (20.3%)	456 (21.8%)	465 (22.5%)	251 (12.4%)	239 (14.7%)	409 (13.4%)	3,444 (16.9%)	1,393 (20.6%)	21,680 (10.5%)	120,112 (13.0%)
	35-44	137 (11.3%)	331 (13.3%)	575 (13.9%)	225 (13.9%)	357 (17.0%)	369 (17.9%)	151 (7.4%)	115 (7.1%)	359 (11.8%)	2,619 (12.9%)	946 (14.0%)	21,384 (10.3%)	111,429 (12.0%)
	45-54	95 (7.8%)	479 (19.2%)	435 (10.5%)	162 (10.0%)	358 (17.1%)	50 (2.4%)	302 (14.9%)	137 (8.4%)	382 (12.6%)	2,400 (11.8%)	561 (8.3%)	27,744 (13.4%)	131,002 (14.1%)
	55-59	200 (16.4%)	165 (6.6%)	188 (4.5%)	63 (3.9%)	120 (5.7%)	101 (4.9%)	117 (5.8%)	236 (14.5%)	260 (8.5%)	1,450 (7.1%)	324 (4.8%)	15,667 (7.6%)	63,425 (6.8%)
	60-64	78 (6.4%)	89 (3.6%)	186 (4.5%)	94 (5.8%)	126 (6.0%)	70 (3.4%)	166 (8.2%)	186 (11.4%)	243 (8.0%)	1,238 (6.1%)	257 (3.8%)	16,763 (8.1%)	57,942 (6.3%)
	65 and over	254 (20.9%)	343 (13.8%)	200 (4.8%)	291 (17.9%)	280 (13.4%)	224 (10.8%)	354 (17.4%)	463 (28.4%)	554 (18.2%)	2,963 (14.6%)	790 (11.7%)	48,311 (23.3%)	147,208 (15.9%)

Source: 2011-2015 ACS 5-Year Estimates: Total Population.

Figure 2-1: Census Block Groups fully or partially within the Study Area

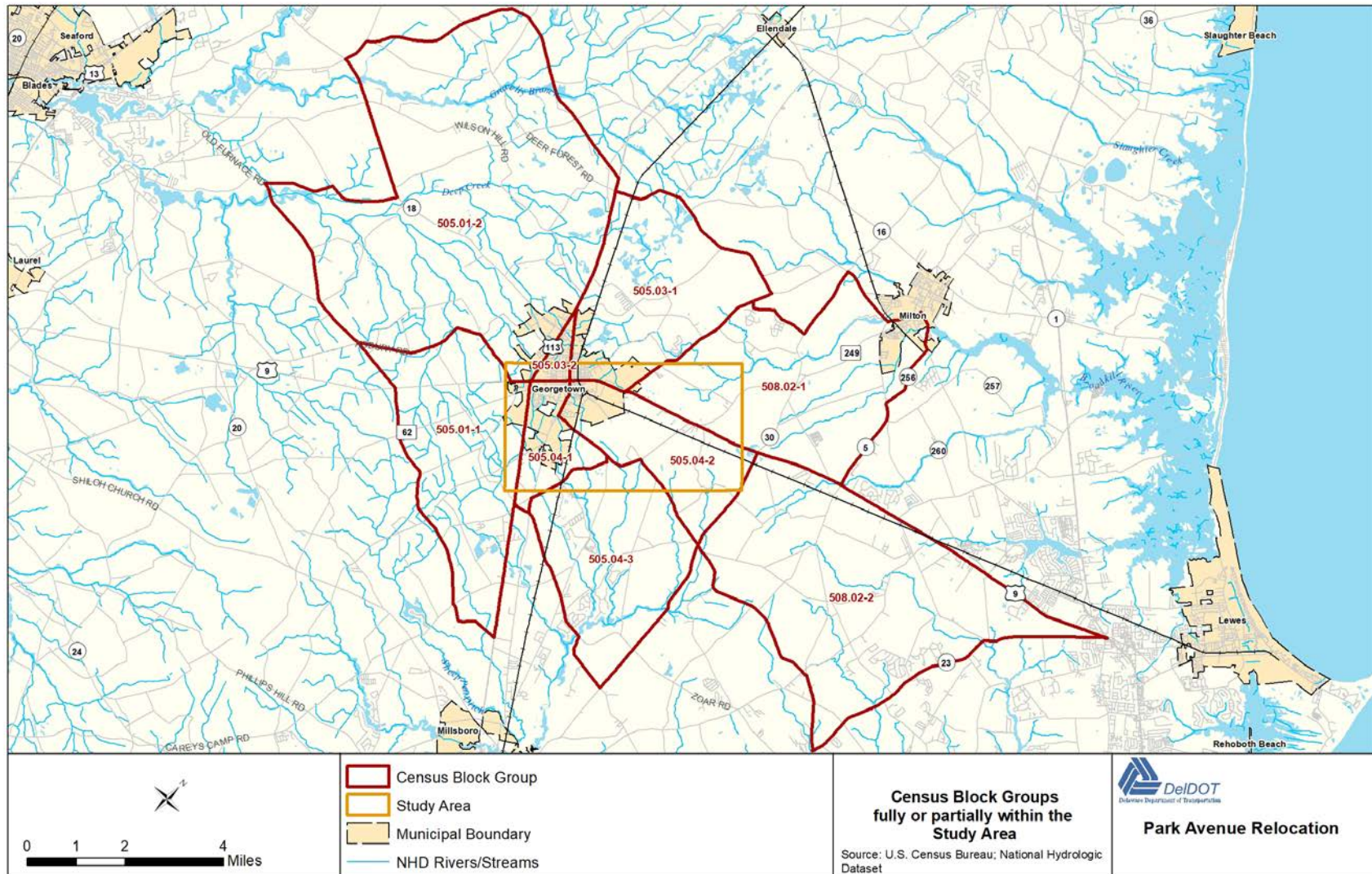


Table 2-2: Historic Population Change

Locality	1970	1980	1990	2000	2015	2015 - 1970 Change	Total % Change
Sussex County	80,356	98,004	113,229	156,638	207,302	126,946	158%
Delaware	548,104	666,168	666,168	783,600	926,454	378,350	69%

Source: US Census Data, Population of Counties by Decennial Census: 1900-1990, and ACS 5-Year Estimates 2011-2015: Total Population.

Table 2-3: Projected Population Change

Locality	2015	2040 Population Projection	2015 - 2040 Population Change	2015 - 2040 Percent Change
Sussex County	207,302	258,760	51,458	24.8%
Delaware	926,454	1,065,168	138,714	15.0%

Source: DPC, 2016.

Table 2-4 provides the total number of housing units within the study area, the Town of Georgetown, Sussex County, and the State of Delaware, as well as the number of occupied units. All geographic areas have a percentage of occupied housing units over 80 percent, other than Sussex County, with 64 percent. The study area has 7,437 total housing units and of those 6,617 housing units are occupied. Comparatively, the Town of Georgetown has 2,164 total housing units and of those 1,951 housing units are occupied.

Table 2-4: Housing Units and Occupancy Rates

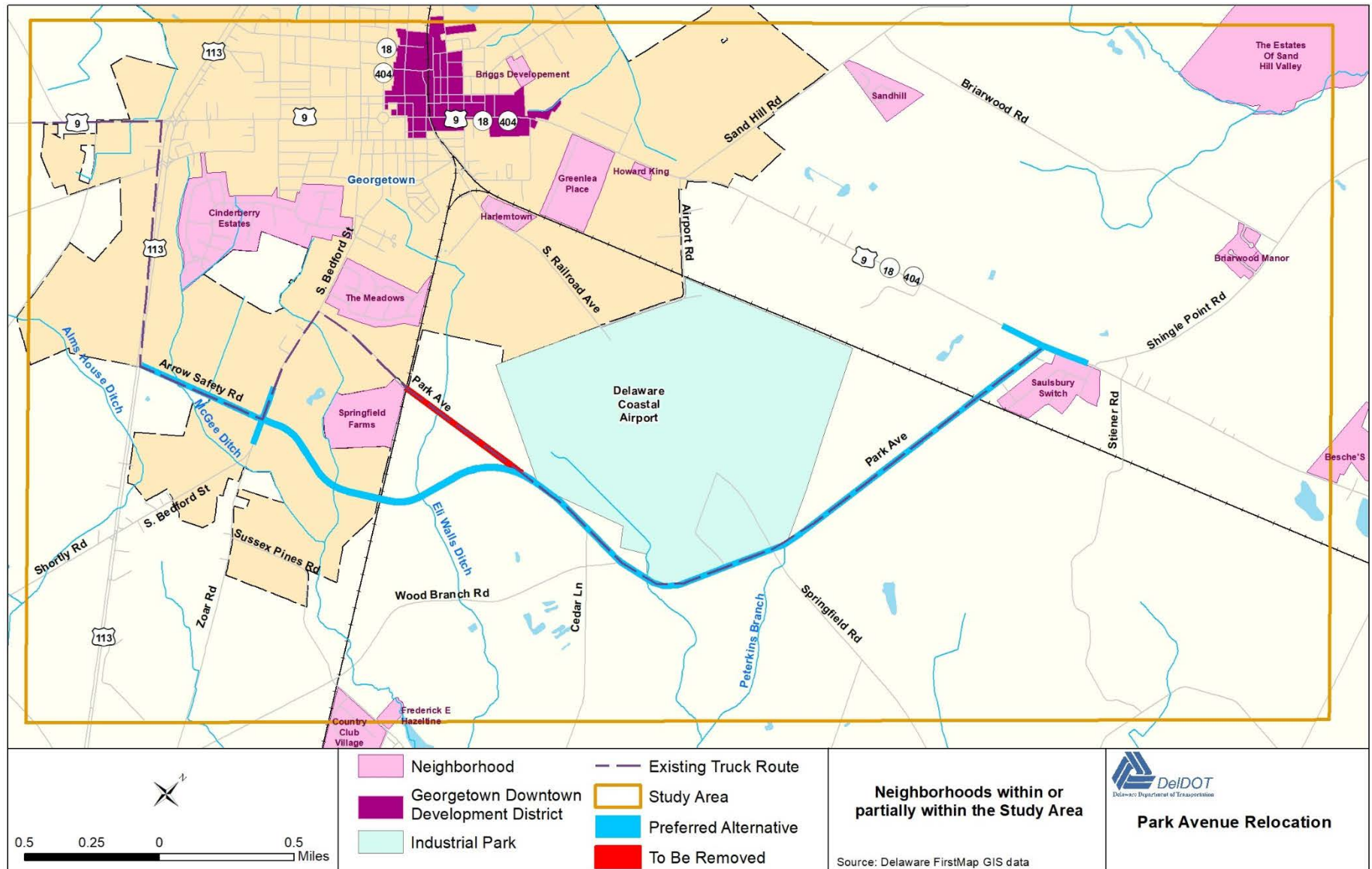
Census Tract / Geographic Area		Total Housing Units	Occupied Housing Units	% Occupied Housing Units
505.01	Block Group 1	535	502	94%
	Block Group 2	1,040	915	88%
505.03	Block Group 1	1,079	1,015	94%
	Block Group 2	521	474	91%
505.04	Block Group 1	397	368	93%
	Block Group 2	736	647	88%
	Block Group 3	734	685	93%
508.02	Block Group 1	878	746	85%
	Block Group 2	1,517	1,265	83%
Study Area		7,437	6,617	89%
Town of Georgetown		2,164	1,951	90%
Sussex County		127,680	81,183	64%
State of Delaware		414,416	344,022	83%

Source: US Census Bureau 2011-2015 ACS 5-Year Estimates: Occupancy Status, Housing Units.

2.2.2 Neighborhoods

Fourteen neighborhoods are interspersed throughout the study area, including the Georgetown Downtown Development District, as shown on **Figure 2-2**. The Town of Georgetown is easily accessible by major roadways and is the central location of Sussex County's legislative and judicial activity, as well as a large industrial park associated with Delaware Coastal Airport.

Figure 2-2: Neighborhoods within or partially within the Study Area



2.2.3 Employment

According to the Delaware Department of Labor (DeIDOL) Occupation and Industry Projections for Sussex County, the total employment across all industries within the county is expected to grow by an estimated 11 percent from 2014 to 2024 (DeIDOL, 2017c). Two industries are projected to decrease between 2014 and 2024: Agriculture, Fishing, and Forestry (4 percent), and Management of Companies and Enterprises (29 percent). All Sussex County industries' projected growth from 2014 and 2024 are displayed in **Table 2-5**.

Table 2-5: Sussex County, Delaware - Industry Projections 2024

Industry	Estimated Employment (2014)	Projected Employment (2024)	Percent Change
Total Employment, All Jobs	81,750	90,810	11%
Total Self-Employed and Unpaid Family Workers, Primary Job	6,530	7,370	13%
Agriculture, Fishing, and Forestry	2,970	2,850	-4%
Utilities	350	360	3%
Construction	4,120	5,040	22%
Manufacturing	9,700	9,870	2%
Wholesale Trade	650	730	12%
Retail Trade	11,860	12,920	9%
Transportation and Warehousing	1,730	1,900	10%
Information	480	500	4%
Finance and Insurance	1,650	1,950	18%
Real Estate, and Rental and Leasing	1,370	1,430	4%
Professional and Technical Services	1,800	1,990	11%
Management of Companies and Enterprises	170	120	-29%
Administrative and Waste Services	3,370	3,810	13%
Educational Services	5,480	5,930	8%
Health Care and Social Assistance	10,340	12,720	23%
Arts, Entertainment, and Recreation	1,240	1,410	14%
Accommodation and Food Services	10,570	11,880	12%
Other Services, except Public Administration	4,330	4,730	9%
Government	2,120	2,290	8%

Source: DeIDOL, 2017c.

According to the Delaware Office of Occupational and Labor Market Information Local Area Unemployment Statistics, there were 103,399 persons employed out of a labor force of 108,050 in Sussex County in July 2017. The unemployment rate was at 4.3 percent which was slightly lower than Delaware's rate of 5.1 percent (not seasonally adjusted) in July 2017 (DeIDOL, 2017a). The most prevalent industries in Sussex County, as reported by the Delaware Office of Occupational and Labor Market Information, include:

1. Education and Health Services (17.2 percent)
2. Total Government (13.4 percent)
3. Retail Trade (11.7 percent)
4. Accommodation and Food Services (10 percent)

5. Finance and Insurance (9.2 percent).

The largest employers, as of 2017, identified in the Sussex County Economic Development Office publication include:

- **Manufacturing:** Dogfish Head Brewery, Invista, Merck Animal Health, NRG Energy, and ALOFT AeroArchitects (formerly PATS Aircraft Systems).
- **Agriculture:** Allen Harim Foods, LLC, Mountaire Farms, Perdue, Inc., and Sea Watch International.
- **Healthcare:** Bayhealth Medical Center, Beebe Medical Center, La Red Health Center, Nanticoke Health Services, and Peninsula Regional Medical Center (Sussex County Economic Development, 2017).

Additionally, the Delaware Coastal Airport is one of the key economic engines in Sussex County. The airport and the associated Sussex County Industrial Park are situated on 350 acres within the study area. The industrial park complex contains multiple businesses and employs over a thousand people (Sussex County, 2015). Aviation demands for non-military revenue and non-revenue charter operations as well as business jet operations are anticipated to increase from 47,124 in the year 2002 to approximately 57,255 in the year 2021 (FAA, 2011). These anticipated business jet operation increases will create the need for additional hangars, which will lead to increased traffic, jobs, and general economic development to the area (FAA, 2011). As the first step in a multi-phase, \$25 million plan to modernize the airport to accommodate faster and heavier aircraft than those currently utilizing it, the Delaware Coastal Airport completed a 500-foot extension of Runway 4-22 to 5,500 feet (Sussex County, 2015).

2.2.4 Income

Table 2-6 identifies the average median household income of all Census block groups within the study area. US Census 2011-2015 ACS 5-Year Median Household Income Estimates data were compared to the Town of Georgetown, Sussex County, and the State of Delaware as a whole.

Table 2-6: Median Household Income by Census Tract in 2015 Inflation Adjusted Dollars

Census Tract	Median Household Income
Study Area ¹	\$52,785
Town of Georgetown	\$47,525
Sussex County	\$53,505
Delaware	\$60,231

¹ Averaged across block groups within Study Area.

Source: US Census Bureau 2011 - 2015 ACS 5-Year Average: Median Household Income.

Municipal governments are financed through real property tax receipts. Real estate in incorporated areas are subject to municipal property taxes, county property taxes, school district property taxes, and vocational school property taxes. Sussex County property taxes are set at \$0.3983 per \$100 assessed property value, this rate has held constant since the last assessment in 1974 (Delaware Economic Development Office, 2014).

2.3 Future Conditions

2.3.1 No-Build Alternative

Since the No-Build Alternative would include no improvements within the study area, this alternative would have no impacts on population, neighborhoods, employment, income, or housing. However, this alternative would not support economic growth and development goals as identified in the *Town of Georgetown Comprehensive Plan* (Town of Georgetown, 2010).

2.3.2 Preferred Alternative

Employment growth, local employment opportunities, and support to existing local businesses associated with the Preferred Alternative would be both temporary, associated with roadway construction, and permanent, associated with the potential for growth at the airport and the surrounding area. Improvements to Park Avenue are included within the *Town of Georgetown Comprehensive Plan* as means to achieve the Town of Georgetown's economic growth and development goals (Town of Georgetown, 2010). Additionally, no displacements are anticipated; therefore, no impacts to housing are anticipated. The Meadows and Springfield Farms neighborhoods would be benefitted by the Preferred Alternative because the Preferred Alternative would move the truck route away from the residential area located in the vicinity of the Park Avenue / South Bedford Street intersection.

3.0 Environmental Justice

3.1 Methodology

This project has been evaluated in accordance with Title VI of the Civil Rights Act of 1964, as amended which requires that no person in the United States shall on the ground of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. In addition, Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations*, and the US Department of Transportation (USDOT) Order 5610.2(a) direct Federal agencies to identify and address disproportionately high and adverse human health or environmental effects that their programs, policies and activities may have on minority and low-income populations to the greatest extent practicable. The goal of this order is to avoid the disproportionate placement of adverse environmental economic, social, or health impacts from federal actions and policies on minority and low-income population that might be affected by the implementation of a proposed action. Incorporating Environmental Justice principles throughout the transportation planning and decision-making process allows for an increased awareness of the effects and impacts of transportation decisions on the human environment.

As guided by FHWA Order 6640.23A, *FHWA Actions to Address Environmental Justice in Minority and Low-Income Populations*, proactive efforts should be taken to ensure meaningful opportunities for public participation by all interested parties, including low-income and minority populations (FHWA, 2012).

3.1.1 Minority Populations

According to FHWA Order 6640.23A, *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, and for the purposes of this Technical Report, minority populations are comprised of members of the following population groups (FHWA, 2012).

- Black or African American: a person having origins in any of the black racial groups of Africa;
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture of origin, regardless of race;

- Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent;
- American Indian or Alaskan Native: a person having origins in any of the original people of North American, South American (including Central America), and who maintains cultural identification through tribal affiliation or community recognition or;
- Native Hawaiian or Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa or other Pacific Islands.

Furthermore, FHWA 6640.23A provides the following definition of a minority population:

- Minority Population: any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient person (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity (FHWA, 2012a).

As guided by the Council on Environmental Quality's (CEQ) *Guidance Under the National Environmental Policy Act*, and in accordance with the terms of EO 12898, a minority population will be found to exist where either (a) the minority population of the affected area exceeds 50 percent of total population or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis. As described below, no minority population within the study area exceeds 50 percent of the total population; therefore, this analysis must focus on identifying any minority populations that are meaningfully greater than the general population. The CEQ guidance does not define the specific percentage that should be used for determining if the minority or low-income population is "meaningfully greater" than the average in the surrounding area. However, it is consistent with the CEQ guidance to set a threshold that is higher than (not equal to) the average of the minority population in the surrounding jurisdictions (CEQ, 1997). For the purposes of this Technical Report and the associated EA, a Census block group was determined to have a "meaningfully greater" minority population or Hispanic/Latino population if the percentage of minority or Hispanic/Latino persons within the Census block group was 10 percentage points or more than the average percentage of minority or Hispanic/Latino persons within the study area. The study area average percentage of minority persons is 16.2 percent. Ten percentage points more than this average creates a "meaningfully greater" minority threshold of 26.2 percent. Using the same calculations, the threshold would be 35.8 percent (25.8 percent plus 10 percent) for Hispanic/Latino populations.

To perform an environmental justice analysis, Census data was collected on the racial and ethnic composition for each of the nine block groups fully or partially within the study area. Specifically, Census Bureau 2011-2015 ACS 5-Year Estimates, *Race Alone or in Combination and Hispanic or Latino*, was used for the purposes of identifying minority populations within the study area. The ACS 5-year estimates were utilized due to their ability to provide the most reliable, largest sample size available, and their ability to perform best in analyzing smaller populations.

3.1.2 Low-Income Populations

In accordance with the terms of FHWA 6640.23A and USDOT Order 5610.2(a), low-income persons include any persons whose median household income is at or below the Department of Health and Human Services (HHS) poverty guidelines (FHWA, 2012b). Published in the Federal Register on January 22, 2015, **Table 3-1** identifies the 2015 HHS poverty guidelines. To be conservative a Census block group was identified as being low-income population when the median household income for the area was below the HHS poverty threshold for a family of four, which was \$24,250 in 2015.

Table 3-1: 2015 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

Persons in family/household	Poverty Guideline
1	\$11,770
2	\$15,930
3	\$20,090
4	\$24,250
5	\$28,410
6	\$32,570
7	\$36,730
8	\$40,890

Source: US Department of Health and Human Services 2015 Poverty Guidelines.

Furthermore, FHWA Order 6640.23 defines low-income populations as follows:

- **Low-Income Population:** any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity (FHWA, 2012a).

The 2011-2015 ACS 5-Year Estimates, Median Income in the Past 12 Months (in 2015 Inflation-Adjusted Dollars) was used to generate median household income data for Census block groups within the study area.

3.2 Existing Conditions

3.2.1 Minority Populations

Table 3-2 identifies the racial and ethnic composition for the nine block groups fully or partially within the study area, as well as the Town of Georgetown, Sussex County, and the State of Delaware as a whole, to serve as a measure of comparison.

As noted above, the threshold for a “meaningfully greater” minority population is 26.2 percent and threshold for a “meaningfully greater” Hispanic/Latino population is 35.8 percent. Of the nine Census block groups partially or fully within the study area, three Census block groups were determined to be Environmental Justice (EJ) communities; one had a “meaningfully greater” minority population (Census Tract 505.04, block group 1) and three had “meaningfully greater” Hispanic/Latino populations (Census Tract 505.03, block groups 1 and 2 and Census Tract 505.04, block group 2) (refer to highlighted Census block groups in **Table 3-2** and **Figure 3-1**). The EJ Census block groups within the study area constitute 49 percent or 9,917 individuals of the total 20,325 population and are spread throughout the study area.

Table 3-2: Study Area Racial and Ethnic Characteristics by Locality

Locality	Total Population	White ¹		Black or African American ¹		American Indian and Alaska Native ¹		Asian ¹		Native Hawaiian and Other Pacific Islander ¹		Some Other Race ¹		Two or More Races ¹		Total Block Group Minority Population		Hispanic or Latino-White ²		Hispanic or Latino – Other Races ²		Total Block Group Hispanic / Latino Population ³	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
505.01-1	1,217	794	65.2%	207	17.0%	0	0.0%	67	5.5%	0	0.0%	0	0.0%	40	3.3%	314	25.8%	51	4.2%	58	4.8%	109	9.0%
505.01-2	2,491	1,862	74.7%	267	10.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	14	0.6%	281	11.3%	122	4.9%	226	9.1%	348	14.0%
505.03-1	4,132	967	23.4%	487	11.8%	0	0.0%	27	0.7%	0	0.0%	0	0.0%	37	0.9%	551	13.3%	1,549	37.5%	1,065	25.8%	2,614	63.3%
505.03-2	1,623	595	36.7%	225	13.9%	0	0.0%	0	0.0%	0	0.0%	7	0.4%	11	0.7%	243	15.0%	644	39.7%	141	8.7%	785	48.4%
505.04-1	2,095	1,385	66.1%	619	29.5%	4	0.2%	4	0.2%	0	0.0%	0	0.0%	8	0.4%	635	30.3%	57	2.7%	18	0.9%	75	3.6%
505.04-2	2,067	874	42.3%	211	10.2%	21	1.0%	0	0.0%	0	0.0%	135	6.5%	59	2.9%	426	20.6%	767	37.1%	0	0.0%	767	37.1%
505.04-3	2,029	1,316	64.9%	283	13.9%	0	0.0%	22	1.1%	0	0.0%	30	1.5%	12	0.6%	347	17.1%	353	17.4%	13	0.6%	366	18.0%
508.02-1	1,628	1,455	89.4%	96	5.9%	0	0.0%	6	0.4%	0	0.0%	0	0.0%	10	0.6%	112	6.9%	44	2.7%	17	1.0%	61	3.7%
508.02-2	3,043	2,532	83.2%	343	11.3%	12	0.4%	6	0.2%	0	0.0%	0	0.0%	23	0.8%	384	12.6%	53	1.7%	74	2.4%	127	4.2%
Study Area Total	20,325	11,780	58.0%	2,738	13.5%	37	0.2%	132	0.6%	0	0.0%	172	0.8%	214	1.1%	3,293	16.2%	3,640	17.9%	1,612	7.9%	5,252	25.8%
George-town	6,775	2,507	37.0%	680	10.0%	21	0.3%	27	0.4%	0	0.0%	142	2.1%	107	1.6%	977	14.4%	2,188	32.3%	1,103	16.3%	3,291	48.6%
Sussex County	207,302	155,138	74.8%	25,749	12.4%	715	0.3%	2,317	1.1%	18	0.0%	529	0.3%	3,794	1.8%	33,122	16.0%	13,712	6.6%	5,330	2.6%	19,042	9.2%
Delaware	926,454	591,922	63.9%	195,058	21.1%	2,542	0.3%	33,354	3.6%	146	0.0%	2,177	0.2%	20,549	2.2%	253,826	27.4%	50,701	5.5%	30,005	3.2%	80,706	8.7%

Note: Census block groups that are above the threshold for minority or Hispanic/Latino are highlighted in yellow.

1 Regardless of Hispanic/Latino designation

2 The U.S. Census Bureau defines Hispanic or Latino as a person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. Because Hispanic or Latino may be any race, data may overlap for other race categories and percentages were not calculated.

3 Total minority and/or Hispanic/Latino is the sum of all non-White races plus Hispanic or Latino – White.

Source: US Census Bureau 2010 - 2014 ACS 5-Year Average: Hispanic or Latino Origin by Race.

The average Hispanic or Latino population within the study area is 25.8 percent. The threshold for Hispanic or Latino populations was established as ten percent greater than the study area average (35.8 percent or greater). Three Census block groups meet the threshold for Hispanic/Latino populations greater than the 35.8 percent threshold – Census tract 505.03, block group 1 and 2, and Census tract 505.04, block group 2. Census tract 505.04, block group 2 also has the third highest minority population percentage in the study area. Census block groups that exceed either threshold are highlighted in yellow in **Table 3-2** and are shown on **Figure 3-1**.

3.2.2 Low-Income Populations

Table 3-3 identifies the median income of each block group fully or partially within the study area. As noted above, the threshold for identifying a Census block group as low income is median household income of \$24,250. As indicated, in **Table 3-3**, none of the block groups have a median household income below this threshold. Thus, no low-income populations have been identified within the project study area and no further assessment of impacts to low-income populations is required.

Table 3-3: Median Household Income by Census Tract in 2015 Inflation Adjusted Dollars

Census Tract		Median Household Income
Census Tract 505.01	Block Group 1	\$50,833
	Block Group 2	\$45,313
Census Tract 505.03	Block Group 1	\$48,063
	Block Group 2	\$47,660
Census Tract 505.04	Block Group 1	\$59,063
	Block Group 2	\$34,863
	Block Group 3	\$64,187
Census Tract 508.02	Block Group 1	\$63,690
	Block Group 2	\$61,389
State of Delaware		\$60,231
Sussex County		\$53,505
Town of Georgetown		\$47,525

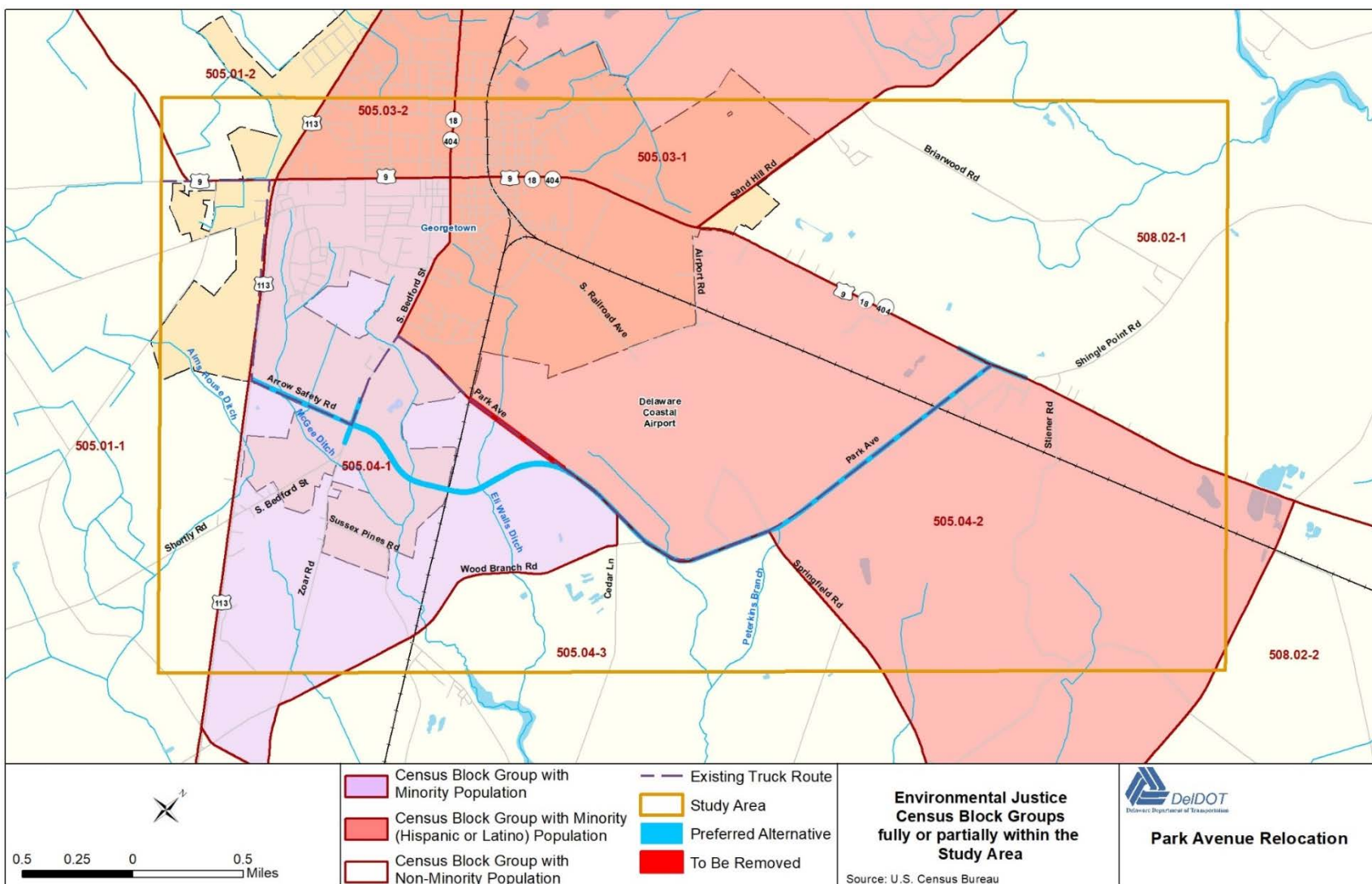
Source: 2011-2015 ACS 5-Year Estimates, Median Income in the Past 12 Months (in 2015 Inflation-Adjusted Dollars).

3.3 Future Conditions

3.3.1 No-Build Alternative

No direct effects on EJ communities have been identified for the No-Build Alternative. Increasing traffic and deterioration in local accessibility would equally affect minority and Hispanic/Latino populations and non-minority/Hispanic/Latino populations.

Figure 3-1: Environmental Justice Census Block Groups fully or partially within the Study Area



3.3.2 Preferred Alternative

According to FHWA Order 6640.23A, a disproportionately high and adverse effect on minority and low-income populations includes those which are “predominately borne by a minority population and / or a low-income population; or will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population” (FHWA, 2012). These Environmental Justice regulations allow for meaningful participation among these populations in the project development process, and assure that the services and benefits of the proposed project are fairly distributed to avoid discrimination.

The Preferred Alternative would improve connectivity and safety through the area for both minority/Hispanic/Latino populations and non-minority/Hispanic/Latino populations. The impacts associated with the Preferred Alternative would not cause disproportionately high and adverse impacts to minority and/or Hispanic/Latino populations. Therefore, no mitigation measures are proposed.

4.0 Community Facilities

4.1 Methodology

Community facilities are structures and/or spaces that provide a variety of services for public benefit, including educational facilities, places of worship, emergency services facilities (police and fire stations), health care facilities, governmental facilities, post offices, airports, libraries, museums, historical places, cemeteries, and recreational centers. Community facilities were identified through a review of GIS data, parcel ownership information, and local comprehensive plans based on the study area limits as described in **Section 1.1**.

4.2 Existing Conditions

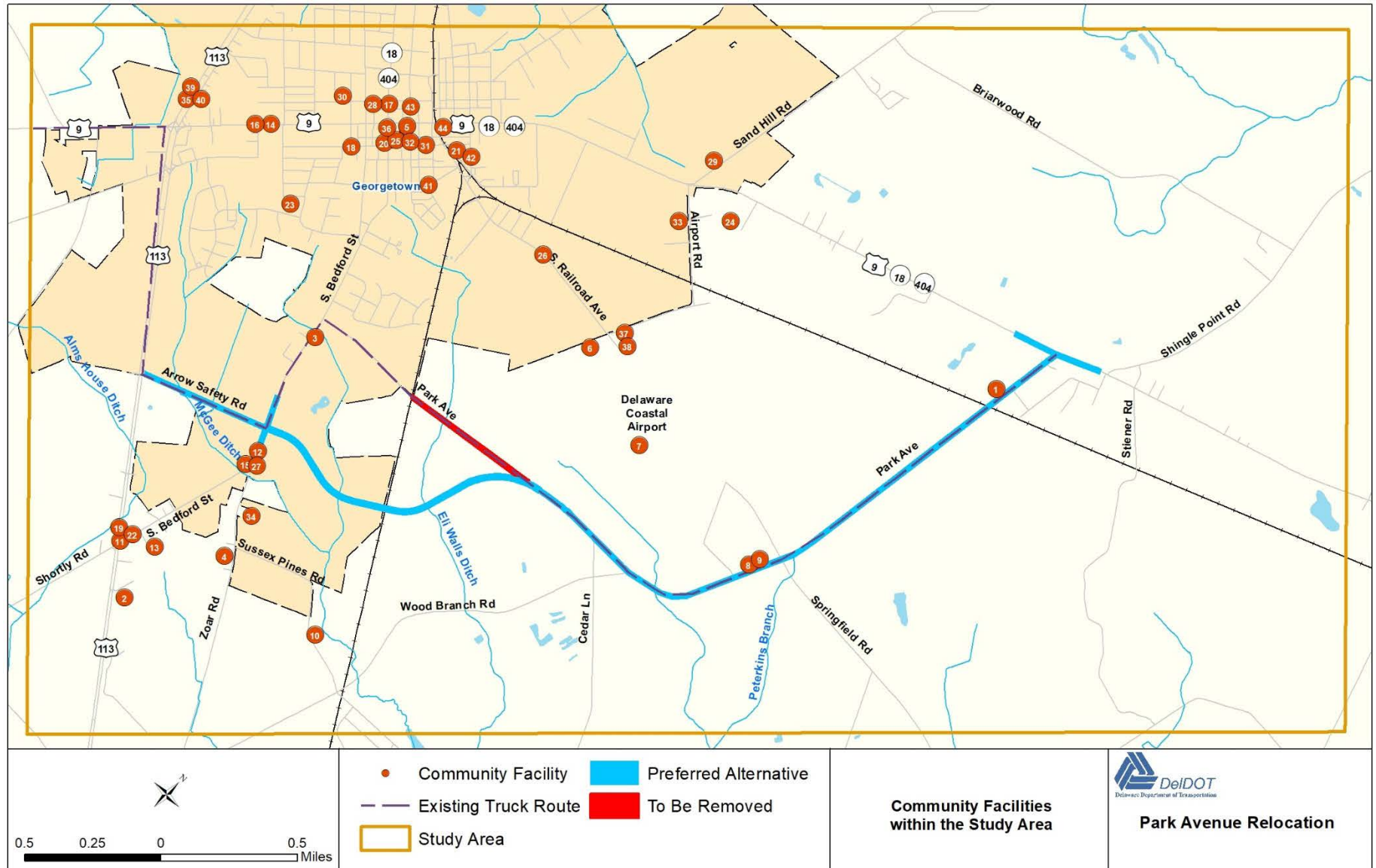
The majority of community facilities identified were located primarily to the north, within or immediately adjacent to the Town of Georgetown. **Table 4-1** lists the community facilities that have been identified within the study area and **Figure 4-1** displays these community facilities.

Table 4-1: Community Facilities within the Study Area

Map ID	Community Facility	Facility Address	Facility Description
1	Anglican Parish of Saint James	23269 Park Avenue	Church
2	Calvary Baptist Church	22860 Dupont Blvd	Church
3	Catholic Charities	406 S Bedford St	Church
4	Church of God Prophecy	21950 Zoar Rd	Church
5	Court of Common Pleas	1 The Cir #1	Government
6	Delaware Aviation Museum Foundation	21781 Aviation Ave	Museum
7	Delaware Coastal Airport	21553 10N-1	Airport
8	Delaware State Fire Marshall Office	22705 Park Avenue	Fire Department
9	Delaware State Fire School	22705 Park Avenue	Fire Department
10	Delmarva Christian High	21777 Sussex Pines Rd	School
11	Georgetown Circle	1 S Bedford St	Recreation
12	Georgetown Community Bible Church	510 S Bedford St	Church

Map ID	Community Facility	Facility Address	Facility Description
13	Georgetown Division of Motor Vehicles	23737 Dupont Blvd	Government
14	Georgetown Elementary School	301-A W Market St	School
15	Georgetown Historical Society	510 S Bedford St	Historical Place
16	Georgetown Middle School	301 W Market St	School
17	Georgetown Presbyterian Church	203 N Bedford St	Church
18	Georgetown Public Library	123 W Pine St	Library
19	Georgetown State Service Center	546 S Bedford St	Government
20	Georgetown Volunteer Fire	100 S Bedford St	Fire Department
21	Grace United Methodist	7 S King St	Church
22	Health & Social Services Department	546 S Bedford St	Government
23	Iglesia Abundante Vida	207 Primary St	Church
24	Jesus is Lord Church of Deliverance	40 Ingramtown Rd	Church
25	Law Library	5 E Pine St	Library
26	Layton Park	363 S Railroad Ave	Recreation
27	Marvel Carriage Museum	510 S Bedford St	Museum
28	North Bedford Street Park	203 N Bedford St	Recreation
29	River City Church	20520 Sand Hill Rd	Church
30	St. Michael the Archangel	202 Edward St	Church
31	St. Paul Episcopal	122 E Pine St	Church
32	Superior Court	1 The Cir #2	Government
33	Sussex Academy of Arts and Sciences	21150 Airport Road	School
34	Sussex Community Corrections	23207 Dupont Blvd	Government
35	Sussex County Administrative Office West Complex	22215 Dupont Blvd	Government
36	Sussex County Constable	2 The Cir	Government
37	Sussex County Emergency	21911 10N-1	Government
38	Sussex County Fire & Ambulance	21911 10N-1	Government
39	Sussex County Library Administration	22216 Dupont Blvd	Government
40	Sussex County Sherriff	22215 Dupont Blvd	Government
41	Union Cemetery	158 E Adams St	Cemetery
42	US Post Office	115 S King St	Post Office
43	Wesley United Methodist Church	102 E Laurel St	Church
44	Wilson Park	E Market St	Recreation

Figure 4-1: Community Facilities within the Study Area



4.3 Future Conditions

4.3.1 No-Build Alternative

Since the No-Build Alternative would include no improvements within the study area, this alternative would have no impacts on community facilities.

4.3.2 Preferred Alternative

The Preferred Alternative would not negatively impact any community facilities. The Preferred Alternative would improve traffic operations and provide a route around Georgetown. The improved intermodal connections and reduced congestion through the Town of Georgetown and along Park Avenue could enhance linkages between community facilities.

5.0 Land Use

5.1 Methodology

Existing land use was mapped using the Delaware Land Use, Land Cover 2012 dataset provided by Delaware's GIS *FirstMap Open Data*. Each locality's master transportation plan and/or master comprehensive plan were reviewed to identify any future land use plans for growth and development in the study area.

5.2 Existing Land Use

The study area is dominated by cropland/rangeland and wetland land use, consisting of a combined 48 percent (3,852 acres) of the study area total of approximately 8,007 acres, as shown in **Figure 5-1**. Single-family residential (12%) and airport (6%) land uses make up the majority of the remaining area. **Table 5-1** shows the acreage and percentage of each land use present within the study area.

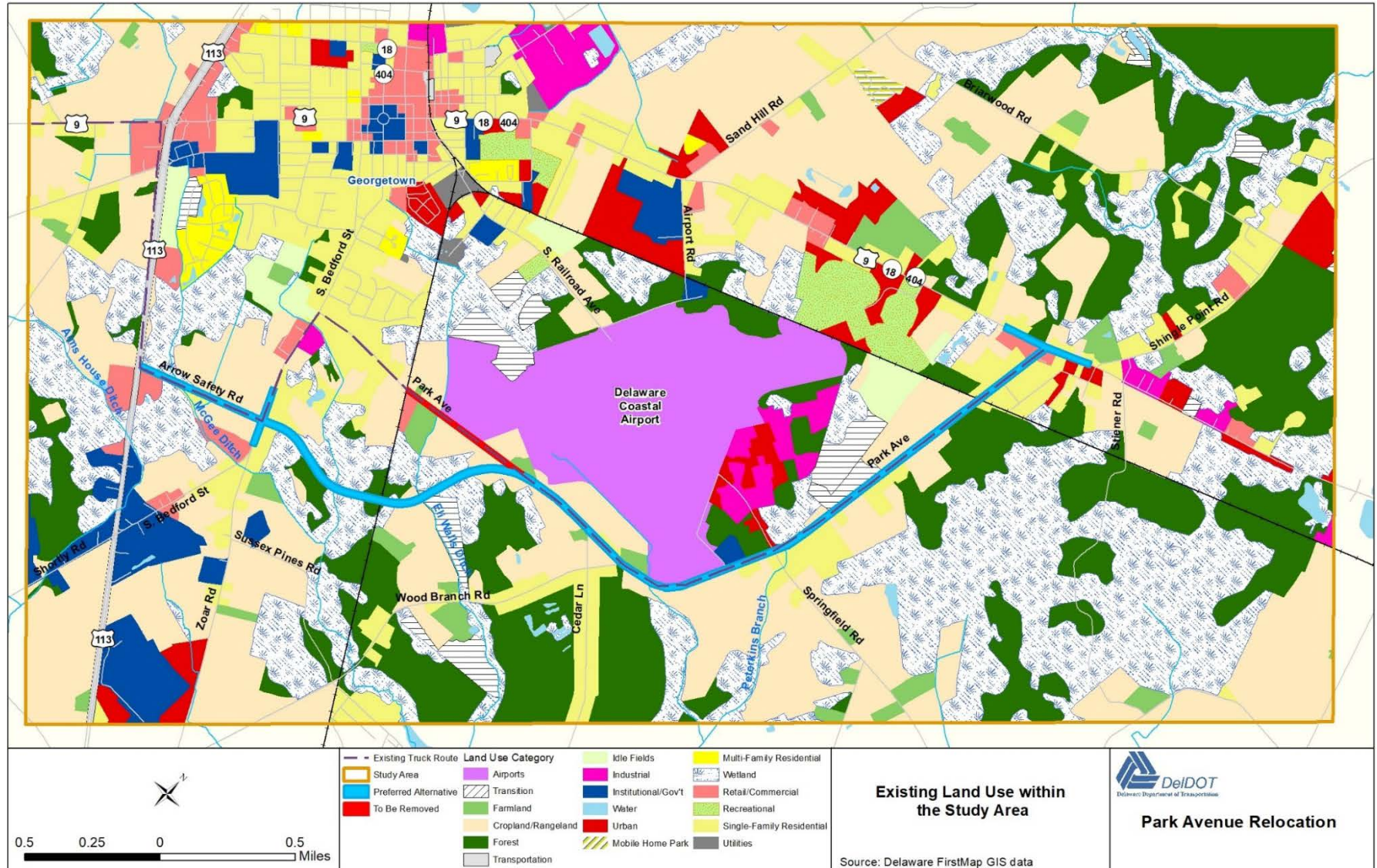
Table 5-1: Existing Land Use within the Study Area

Land Use	Acres within Study Area	Percent of Study Area Covered
Airport	472	6%
Cropland/Rangeland	2,115	26%
Farmland	141	2%
Forest	1,323	17%
Idle Fields	76	1%
Industrial	124	2%
Institutional/Governmental	250	3%
Mobile Home Park	9	0%
Multi-Family Residential	61	1%
Recreational	98	1%
Retail/Commercial	204	3%
Single-Family Residential	957	12%
Transition	126	2%
Transportation	50	1%
Urban	229	3%
Utilities	21	0%
Water	16	0%
Wetland	1,737	22%
Total	8,007	100%

Note: Where appropriate, some land use/land cover types have been combined to reflect similar types in total.

Source: Delaware's FirstMap Open Data, 2016a.

Figure 5-1: Existing Land Use within the Study Area



5.3 Future Land Use

Future land use within the study area will be primarily guided by the recommendations of the Sussex County and Town of Georgetown existing master plans and zoning ordinances. The roadways further south of Park Avenue and South Bedford Street, such as Wood Branch Road, support low density residential. The area north of the Town of Georgetown contains a large section of wetlands and forest, including a small section of State Forest. This area is also designated as a well head protection area. Residential mixed with commercial land use borders US 9 and US 113; while the majority of the vacant developable land between these roadways is designated for future residential development.

The study area south of Park Avenue and Arrow Safety Road is primarily characterized by forested areas and farmland. The study area north of Arrow Safety Road and the north east of Park Avenue consists primarily of commercial and residential areas incorporated by the Town of Georgetown, the area north of Arrow Safety Road is planned for residential development. The study area northeast of Park Avenue is characterized by forested areas, farmland, the Delaware Coastal Airport, and the Sussex County Industrial Park.

The Sussex County Comprehensive Plan's Future Land Use Plan identifies the study area as primarily Municipality in Georgetown and directly adjacent to Georgetown, planned Developing Area surrounding Georgetown, and Planned Industrial Area surrounding the Delaware Coastal Airport. Moving northeast on Lewes Georgetown Highway (US 9), the Plan also displays Highway Commercial Areas (Sussex County, 2008). The Town of Georgetown's Future Land Use Plan is consistent with Sussex County's Future Land Use Plan (Town of Georgetown, 2010).

5.4 Future Conditions

5.4.1 No-Build Alternative

Since the No-Build Alternative would include no improvements within the study area, no existing land use or plans for future development would be impacted by the No-Build Alternative.

5.4.2 Preferred Alternative

The Preferred Alternative would convert cropland and residential land use to transportation land use; however, the impact from the project is not expected to be adverse future land use. A substantial amount of the agricultural land in the study area is designated for future development and each locality has plans for development in the study area and around the Preferred Alternative.

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